

Listing of the Claims

Please cancel claims 16-20 without prejudice. Please amend claims 1-9 and 11-15, and add new claims 21-27. This listing of the claims replaces all previous versions of the claims.

1. (currently amended) A slurry polymerization process in which solid polyolefin particles are formed in a ~~liquid diluent~~ fluid slurry, ~~said the~~ process comprising:
~~introducing a liquid diluent to a loop reaction zone;~~
introducing an olefin monomer to a loop reaction zone through a plurality of monomer feeds;
introducing a catalyst to the loop reaction zone, the catalyst being capable of polymerizing ~~said the~~ olefin monomer;
~~introducing an olefin monomer to the loop reaction zone through a plurality of monomer feeds, wherein the olefin monomer is introduced so that the concentration of the olefin monomer within the loop reaction zone is within a desired range;~~
polymerizing the olefin monomer to form a fluid slurry ~~of~~ containing solid polyolefin particles ~~in the liquid diluent;~~ and
withdrawing a portion of the fluid slurry as an intermediate product at a slurry withdrawal location in the loop reaction zone where the intermediate product contains a higher concentration of the solid polyolefin

particles than an average concentration of the solid polyolefin particles
the fluid slurry in the loop reaction zone.

2. (currently amended) A process according to claim 1 wherein ~~said~~ the portion of the fluid slurry is withdrawn through a plurality of catalyst feeds.
3. (currently amended) A process according to claim 1 wherein ~~said~~ the portion of the fluid slurry is withdrawn through a plurality of product take-offs.
4. (currently amended) A process according to claim 3 wherein the monomer feeds and the product take-offs are substantially symmetrically arranged around the loop reaction zone.
5. (currently amended) A process according to claim 1 wherein ~~the desired a~~ range of concentration of the olefin monomer within the loop reaction zone is 1.05% or smaller.
6. (currently amended) A process according to claim 1 wherein ~~said~~ the plurality of monomer feeds comprises at least one monomer feed per 800 feet of reactor length.

7. (currently amended) A process according to claim 1 wherein ~~said~~ the plurality of monomer feeds comprises at least one monomer feed per 18,000 gallons of reactor volume.
8. (currently amended) A process according to claim 1 wherein ~~said~~ the fluid slurry has a plurality of monomer concentrations around the loop reaction zone, and the standard deviation of ~~said~~ the plurality of monomer concentrations is equal to or less than 0.4%.
9. (currently amended) A process according to claim 1 ~~further~~ comprising ~~the steps of~~ measuring the concentration of the olefin monomer in the withdrawn portion of the fluid slurry, and adjusting the introduction of the olefin monomer in response to the measured concentration.
10. (original) A process according to claim 9, wherein the introduction of the olefin monomer is adjusted so that a different amount of the olefin monomer is fed at one monomer feed than the amount of the olefin monomer fed at another monomer feed.
11. (currently amended) A process according to claim 1 wherein ~~said~~ the loop reaction zone has a volume of more than 20,000 gallons.

12. (currently amended) A process according to claim 1 wherein ~~said~~ the loop reaction zone has a volume of more than 30,000 gallons.
13. (currently amended) A process according to claim 1 wherein ~~said~~ the loop reaction zone has a volume of 35,000 gallons or more.
14. (currently amended) A process according to claim 1 wherein each of ~~said~~ the monomer feeds is separately controlled.
15. (currently amended) A process according to claim 1 wherein ~~said~~ the solid polyolefin particles have a molecular weight distribution that is unimodal.
- 16-20. (cancelled)
- 21 (new). A process according to claim 1, comprising introducing a liquid diluent to the loop reaction zone.
- 22 (new). A process according to claim 21, wherein the polyolefin particles comprise polyethylene.
- 23 (new). A process according to claim 1, wherein the polyolefin particles comprise polypropylene.

24. (new) A slurry polymerization process in which solid polyolefin particles are formed in a fluid slurry, the process comprising:

introducing an olefin monomer to a loop reaction zone through a plurality of monomer feeds;

introducing a catalyst to the loop reaction zone, the catalyst being capable of polymerizing the olefin monomer;

polymerizing the olefin monomer to form a fluid slurry containing solid polyolefin particles; and

withdrawing a portion of the fluid slurry as an intermediate product through a plurality of product take-offs, wherein the monomer feeds and the product take-offs are arranged substantially symmetrically about the loop reactor.

25 (new). A process according to claim 24, comprising introducing a liquid diluent to the loop reaction zone.

26 (new). A process according to claim 25, wherein the polyolefin particles comprise polyethylene.

27 (new). A process according to claim 24, wherein the polyolefin particles comprise polypropylene.